

**INDIAN BUREAU OF MINES
MINERALS DEVELOPEMMENT AND REGULATION DIVISION**

MCDR INSPECTION REPORT

Nagpur regional office

Mine file No : MAH/GND/FE-1/NGP

Mine code : 30MSH31001

- (i) Name of the Inspecting : **M017**) **ASHISH MISHRA**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Shri Nitin Wath, Agent
Official with
Designation
- (iv) Date of Inspection : 21/08/2019
- (v) Prev.inspection date : 13/02/2019

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **DHOBITOLA (2.61 H)**
- (b) **Registration NO.** : **IBM/4800/2011**
- (c) Category : B Manual
- (d) Type of Working : Opencast
- (e) Postal address :
State : MAHARASHTRA
District : GONDIA
Village : DHOBITOLA
Taluka : AAMGAON
Post office : AAMGAON
Pin Code : 490016
FAX No. : NIL
E-mail : NIL
Phone : 07172-264240
- (f) Police Station : AMGAON
- (g) First opening date : 04/08/2003
- (h) Weekly day of rest :
2. Address for : F-8, MIDC, HINGNA ROAD,
correspondance : NAGPUR
3. (a) Lease Number : MSH0298
- (b) Lease area : 2.61
- (c) Period of lease : 20
- (d) Date of Expiry : 16/07/2023
4. Mineral worked : IRON ORE Main

5. Name and Address of the

Lessee : JAYASWALS NECO LTD.
F-8, MIDC, HINGNA ROAD,
NAGPUR NAGPUR MAHARASHTRA
Phone:
FAX :

Owner : JAYASWALS NECO LTD.
F-8, MIDC, HINGNA ROAD
NAGPUR NAGPUR MAHARASHTRA
Phone:
FAX :

6. Date of approval of Mining	:	Fresh under rule 22 MCR1960	23/05/2003
Plan/Scheme of Mining	:	Mining Scheme rule 12 MCDR1988	23/11/2009
	:	Mining Scheme rule 12 MCDR1988	28/02/2014
	:	Modif.of approved Mining Plan	19/09/2017

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No backlog.	Nil. The area has already been explored in detail during the SOM period 2013-14 to 2017-18 upto a depth of 14 m by drilling 7 core boreholes with 70 m drilling. Grid of the drilling was less than 50 m.	Out of 2.61 ha area, 1.4850 ha area has been explored. rest of the area is narrow due to its shape and has no possibility of working after leaving non-mining zone on either side of the lease area. Future exploration has not been proposed till reaching 14 m depth from the surface as ore pockets were intersected in the drilled boreholes from 8-13 m except one bore holes in which orebody terminated at 3 m depth.
1b	Exploration over lease area for geological axis 1 or 2	G-1 and G-2	The boreholes drilled achieved a depth of 8-14 m. Depending upon this intersection depth, the area has been classified into G-1 and G-2 area as below: G-1 area: 1.139 ha G-2 area: 0.346 ha	Float ore is occurring over approximately 1.5275 ha area out of total lease area of 2.61 ha out of which 0.346 ha is under G-2.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Nil	No expenditure as no exploration carried out in the year 2018-19.	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	Nil	Entire area has been explored out of which, present mineralized area is 1.485 ha.

1e	Balance reserve as on 01/04/20	Balance reserves as on 01/04/2019 are furnished under 'Actual Work'.	111- 249743 T 122- 12510 T 211- 171439 T 222- 112050 T	Blocked resources under G-2 are under the influence of habitation in the NE side of the lease area and in the southern narrow part of the lease where no systematic development is possible.
1f	General remarks of inspecting officers on geology, exploration etc	The titanomagnetite rich iron ore zone/bodies vary in thickness from about 4 meters to nearly 5meters as observed in the existing leases in the surrounding areas. It strikes in general NW-SE direction in the north to N-S in the center to a nearly NW-SE swing in the south. It dips at steep angle of 70 - 80 deg towards west/north-west. The float ore is confined upto the depth of one meter.		The area has already been proved in detail by drilling boreholes and pits in the area. Around 0.2820 ha area in the SE side is not workable due to narrow width. Overall systematic working and exploration was observed in the lease area.

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	2018-19: Working is proposed in SE part of the existing pit within the grid N2358550 to N2358600 & E 426750 to E426800	Working has been done as per the proposals.	Year-wise working limits have been marked on the ground with wooden logs and mine is being worked as per the proposals. there is no soil available in the area. Top layer is lateritic soil having iron ore floats and below which, in-situ ore pockets are present. Entire excavation is considered under ROM and overburden is almost Nil.

2b	Separate benches in topsoil, overburden and minerals (Rule 15)	In the mineralized zone/working area, upper crust is lateritic soil mixed with float ore below which in-situ ore deposit is lying. Thus, there is no top soil or overburden.	As per the proposals, benches are made in ore only. Top layer is mostly 1-1.5 m float for which bench height is 1-1.5 m after which 1.5 m benches are systematically made in the in-situ deposit.	
2c	Stripping ratio or ore to OB ratio	Not applicable	Nil	
2d	Quantity of topsoil generation in m3	Nil	Nil	
2e	Quantity of overburden generation in m3	Nil	Nil	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			<p>The deposit is having lithological sequence as Float ore mixed with lateritic soil and in-situ ore pockets. Complete ROM is manually crushed, screened and being dispatched to the plant for which the mine is captive. Development of the pit is very systematic as observed during site inspection. Average bench height is 1.5 m and 3 benches are there including top 1 m bench for float ore. The deposit is magnetite which is occurring in float and pockets for which manual working is being done.</p>

Exploitation:

Sl.No.	Item	Proposals	Actual work	Remarks
3a	Number of pit proposed for production	One existing pit is to be extended in SE direction.	As per the proposals.	
3b	Quantity of ROM mineral production proposed	2018-19: 2500 T	2018-19: 2422 T	
3c	Recovery of saleable/usable mineral from ROM production	Saleable mineral recovery is 100% of ROM with generation of 70% Lumps and 30% Fines.	Recovery is 100%. Lumps generated were around 92% and fines were around 8%.	
3d	Quantity of mineral reject generation	Nil	Nil	
3e	Grade of mineral rejects generation and threshold value declared.	Not applicable as no mineral rejects are proposed to be generated. Threshold value is 45% Fe.	Nil	
3f	Quantity of sub grade mineral generation.	Nil	Nil	
3g	Grade of sub grade mineral generation	Not applicable	Nil	
3h	Manual / Mechanised method adopted for segregating from ROM	Manual sorting of ROM	Manual sorting after breaking the ROM manually. Sorting/screening into Lumps and fines only (size-wise sorting).	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No such proposals.	Nil	

3j	Provision of drilling and blasting in mineral benches	No drilling and blasting proposed.	Nil	Drilling and blasting has not been proposed due to presence of habitation in the North Eastern part of the area. Further, the area is not having hard rock formations and no blasting is required in the mine.
3k	Provision of mining machineries in mineral benches	No mechanization is proposed till the environment clearance is obtained for higher production. Mine shall be worked through manual means only.	Manual working only, no mechanization. Only pump is deployed for occassional dewatering of pit in the monsson season, if required. Hammer, chiesels etc. hand held equipments used for manual operations are provisioned.	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Working is proposed through manual means only and the mine is Category 'B' mine.	Heinght of benches is 1-1.5 m which is suitable for the manual mining method as proposed in the Modified Mining Plan.	
3m	Total area covered under excavation/pits	Proposed area to be covered under pits in the 2018-19 to 2022-23 proposal period is 0.3958 ha	Actual area under pits is 0.349 ha as on 31.03.2019.	
3n	Ore to OB ratio for the pit/mine during the year.	Nil	Nil	

3o	Total area put in use under different heads at the end of year	Area under (2018-19 to 2022-23 proposal period): Pits-0.3948 ha Waste Dump- 0.084 ha Mineral Storage- 0.04 ha Infrastructure - 0.01 ha Roads- 0.12 ha Garland Drain- 0.02 ha Plantation- 0.50 ha Area for manual sizing and screening- 0.025 ha Area under encroachment due to dwelling huts (habitation)- 0.013 ha Total- 1.2078 ha	Area under (as on 31.03.2019): Pits- 0.349 ha Infrastructure and roads- 0.205 ha Plantation- 0.46 ha Total- 1.014 ha	Infrastructure and roads covered the area under infrastructure, roads, dwellings and habitation & view point.
3p	Production of ROM mineral during the last five year period as applicable	2018-19- 2500 T 2017-18- 2430 T 2016-17- 2430 T 2015-16- 2430 T 2014-15- 2430 T	2018-19- 2422 T 2017-18- 2430 T 2016-17- 2380 T 2015-16- 2190 T 2014-15- 2429 T	

3q General remarks
of inspecting
officers on
method of mining
etc.

Method of mining
selected is manual
mining. No
drilling and
blasting could be
done due to
presence of
habitation in the
NE side of the
lease area. Also,
geologically, the
area is float and
iron ore pockets
with 51% Fe as
average grade.
Average daily
number of persons
employed in the
mine is 15. Hence,
method of mining
is suitable
considering the
type of deposit
and capital as
well as operating
expenses.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Not applicable	Nil	

4b	Location of topsoil, OB and mineral reject dumps	Top Soil- No proposals and no such dump is available OB/Waste- 1 old dump is available in central eastern part of the lease area at location N2358500 to N2358600 & E426825 to E426875. No fresh proposals are there MIneral rejects- No such proposals or dump available at the site.	As per the proposals, no top soil, overburden or waste and mineral rejects generated in 2018-19. Hence, for the year, information is Nil. One old dump is available at the earmarked location which is reclaimed and rehabilitated through plantation.	
4c	Number of dumps within lease area and outside of lease area	One old dump (Overburden/waste) within lease area	As per the proposals, one old dump is present in the lease area at the location as mentioned under item 4b.	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Dump is located outside mineralized zone.	As per the proposals.	
4e	Number of active and alive dumps.	Nil	Nil	One old dump has been reclaimed by plantation, however, in future, if any waste is generated, it shall be dumped alongside the existing dump.
4f	Number of dead dumps.	One Old dump	One old waste dump is dead and its location is already given under item 4b	
4g	Number of dumps established.	One Waste Dump	One old waste dump covering 0.084 ha area, which is dead has been stabilized by plantation.	

4h	Whether Retaining wall or garland drain all along dumps are there.	Not applicable as there are no dumps present in the area. Garland drain has been made along the old waste dump.	Nil	Garland drain has been made along the old waste dump and from pit to the backfilled area to facilitate watering of plantation carried out.
4i	Length of Retaining wall or garland drain all along dumps	Total length of garland drain is around 40-50 m. Retaining wall not proposed or constructed.	As per the proposals, garland drain is available. Retaining wall is not required.	
4j	Number of settling ponds	No such proposals.	Nil	
4k	Specific comments of inspecting officer on waste dump management			Waste dump management aspect hasn't any impact over the mine as upper crust is having float ore after which insitu ore body is occurring in the area. Complete ROM generated is being dispatched after sizing and no waste/overburden or top soil is generated. One old waste dump available in the area has already been reclaimed covering an area of 0.084 ha.

Solid Waste Management - Backfilling:

Sl.No.	Item	Propasals	Actual work	Remarks
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5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	Backfilling is not proposed as amount of waste generation shall be quite less. The area is proposed to be converted into water reservoir at the conceptual stage.	As per the proposals, no backfilling is proposed.	In the Northern part of the lease area, there is one mined out pit is available at location N2358600 to N2358650 & E426750 to E426850 covering a total area of about 0.1634 ha in which plantation is being carried out without backfilling (as no waste was available). The area was having float ore only; and after recovery of mineral, the mined-out pit was proposed for carrying out plantation.
5b	Area under backfilling of mined out area	No such proposals	Nil	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No top soil is available in the proposed working zone. However, it is proposed to utilize generated soil as and when encountered for plantation purposes.	After the recovery of float ore, left out material is being utilized for carrying out plantation of native species, however, no specific soil having nutrient values is available in the area.	

5d	Total area fully reclaimed and rehabilitated	0.45 ha area is already covered under plantation, additional plantation over 0.01 ha area is proposed in the proposal period 2018-19 to 2022-23. However, this doesn't pertain to backfilling.	As per the proposals, as on 31.03.2019, 0.46 ha area has been reclaimed through plantation.	Reclamation over 0.46 ha area through plantation has already been done in the NE and Eastern side of the lease area (mainly within 7.5 m non-mining zone and including 0.084 ha waste dump area) of the lease and current year reclamation has been done within the grids N2358600 to N2358650 & E426750 & E426800.
5e	General remarks of inspecting officers on backfilling and reclamation etc.			Backfilling isn't possible in the area as per the occurrence and the recovery of ROM. There shall be very less quantum of waste/soil available (if any) at the conceptual stage for backfilling. Thus, the pit is proposed to be converted into water reservoir after exhaustion of minerals or upon achieving economic depth.

Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	Report on work done under PMCP is to be submitted every year on or before 30th June for preceding year as per Rule 26(2) of MCDR'17.	The report is found submitted.	

6b	Area available for rehabilitation (ha) .	0.1643 ha waste land area is available for rehabilitation , out of which 0.05 ha area is proposed for reclamation and rehabilitation through plantation in the proposal period 2018-19 to 2022-23 covering 0.01 ha area each year.	0.01 ha area has been reclaimed through plantation within the grids N2358600 to N2358650 & E426750 & E426800.	
6c	afforestation done (ha).	0.01 ha for five years proposal period 2018-19 to 2022-23	0.01 ha in the year 2018-19	
6d	No. of saplings planted during the year	2018-19 to 2022-23: 50 saplings	2018-19: 250 saplings	Higher number of saplings have been planted considering at least 60% survival rate till the plants attain self-sustaining life. As on the date of inspection, approximate survival rate has been 80-85%.
6e	Cumulative no .of plants	275 Nos.	400 Nos. of saplings/plants	
6f	Any other method of rehabilitation	No such proposals	Nil	
6g	Cost incurred on watch and care during the year	Approximately Rs. 50000/-	Rs 78600/-	This expenditure is over environment monitoring of various parameters and cost incurred in plantation (including watch and care for existing plantation).

6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Nil	Nil	0.1643 ha area after exploitation of float ore is being proposed for plantation work. Backfilling is not possible due to non-availability of waste material.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Nil	Nil	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	Nil	Nil	Out of 0.1643 ha area, 0.01 ha area has been covered under plantation in the year 2018-19.
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Proposals for conversion of mined out pit into water reservoir is given in the approved proposals for conceptual stage.	No such activity has been done yet as the pit has not exhausted.	
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No such proposals	Nil	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Proposals were given for green belt plantation in the N and NE side of the lease area within 7.5 m non-mining zone.	Afforestation has been done in the 7.5 m non-mining zone over 0.45 ha area (including 0.084 ha waste dump area) with around 400 number of saplings/trees.	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	As on 31.03.2019: 0.45 ha	As on 31.03.2019: 0.45 ha	

6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Plantation	Plantation	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Being a category B mine with manual workings only without any drilling and blasting, monitoring is proposed in the core zone only.	Environment monitoring has been done for Ambient Air, Water, ground water and noise and the reports suggest that the parameters are within prescribed limits.	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			Progressive closure operations in the area are satisfactorily being carried out by the lessee. Extensive plantation work has been done around the periphery in the N and E side of the lease area. Expenditure over watch and care of plantation has already been done to ensure sustainability of the plantation. Environment monitoring is being carried out for ambient air, water, ground water and noise and outcomes are satisfactory.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
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7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade-wise and size-wise sorting within lease area. After sorting, the graded ore is being dispatched.	As per the proposals.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual sorting and screening	Manual sizing, sorting and screening	
7c	Different grade of mineral sorted out at mines.	Below 55% Fe Lumps and Below 55% Fe Fines	As per the proposals. Average grade is around 51% Fe	
7d	Any beneficiation process at mines	No such proposals	Nil	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			The mine is a captive mine to the steel plant for the lessee (Plant location: Siltara, Raipur, Chhattisgarh). The mine is a very small mine having manual workings. Magnetite is occurring in float and in-situ and complete ROM, after sizing, sorting and grading (graded on the basis of size-Lumps and Fines), is being dispatched from the mine. Hence, conservation aspect is being taken care of.

Environment :

Sl.No.	Item	Propasals	Actual work	Remarks
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8a	Separate removal and utilization of topsoil (Rule 32)	Not applicable as no top soil is available in the area proposed for working.	Nil
8b	Concurrent use or storage of topsoil	Not applicable	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	In the mineralized zone/working area, upper crust is lateritic soil mixed with float ore below which in-situ ore deposit is lying. Thus, there is no top soil or overburden. Not applicable as no mineral rejects are proposed to be generated.	Nil
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No such proposals	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	One old dump is already reclaimed and 0.01 ha mined out pit area is proposed for restoration through plantation.	One old waste dump covering 0.084 ha area located in the Eastern part of the lease has been stabilized through plantation. 0.01 ha mined out area restored through plantation.

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Baseline information on existence of plantation already furnished in the Mining Plan. Additional plantation proposed till 2018-19 is 275 saplings.	Additional plantation carried out till date is approximately 400 saplings. Baseline information given in the mining plan.	As the area is under protected forest, while obtaining Forest clearance (granted on 23.03.2010), baseline information on existing plantation has already been done for NPV and compensatory afforestation.
8g	Survival rate	90%	90%	
8h	Water sprinkling on roads to control airborne dust	Yes, proposed through mobile water tanker, if required; and shall be done on hire basis.	As per the proposals.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Aesthetic beauty in and around the area is quite satisfactory due to the extensive plantation and systematic working in the area. Small garden with flowering plants has also been developed in front of the office.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
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9a	Status of submission of Monthly and Annual returns	Annual Returns are required to be submitted online on or before 30th June of every year for preceding year Monthly returns are required to be submitted online on or before 10th of every month for preceding month	AR submitted online upto 2018-19 MR submitted online upto Aug'19
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer: Shri Jaiprakash Singh Geologist: Shri Suresh Sonkar (Part Time) Manager: Shri Jaiprakash Singh	Complete and correct information has been furnished as per the Category of the mine.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area under: Covered under current (O/C) Workings- 0.349 ha Occupied by plant, buildings, residential, welfare buildings & roads- 0.205 ha Other Purpose (Plantation)- 0.45 ha Work done under progressive mine closure plan during the year- 0.1 ha	Complete and correct information furnished.

9d	Scrutiny of Annual return on afforestation	(i) Number of trees planted during the year (a) Within lease area-250 saplings, (b) Outside lease area- 20 saplings (ii) Survival rate in percentage (a) Within lease area- 90%, (b) Outside lease area- 60%	Complete information is provided. Information is correct for within the lease area. Outside lease area plantation could not be verified.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	Nil generation as complete ROM is dispatched. hence, correct information provided.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM: Opening Stock and closing stock- Nil, Production- 2422 T Graded Ore: (i) Lumps- (a) Below 55% Fe- Opening Stock-70.37 T, Production- 2220 T, Dispatch- 2199.12 T, Closing Stock- 91.25 T (ii) Fines- (a) Below 55% Fe- Opening Stock-26.125 T, Production- 202 T, Dispatch- 213.195 T, Closing Stock- 14.93 T	Complete and correct information has been furnished. ROM/Graded ore opening stocks are matching with the closing stocks as furnished in the AR for 2017-18 and MR for March'2018 and closing stocks for ROM/graded ore are matching with the opening stocks as furnished in the MR for Apr'19 (also with closing stock for March'19).

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Sale Value: Nil Ex-mine Price: (i) Lumps-(a) Below 55% Fe- Rs 1702.02 per T, (ii) Fines- (a) Below 55% Fe- Rs 1702.02 per T, Cost of Production: Rs 1702.02 per T	Complete and correct information furnished as per the 'Captive' status of the mine.
9h	Scrutiny of Annual return on fixed assets	Value of Fixed Assets: Nil	As the status of the land under lease is Govt. Protected Forest Land, it has not been considered under the asset of the leaseholder. Further, as the working is being done by manual means, plant, machineries value has not been furnished. Under infrastructure, there is only one small kachcha site office. Thus, the information furnished is complete and correct.
9k	Scrutiny of Annual return on mining machineries	Nil	No mechanization is available. In the mining plan also, only one pump for dewatering of pit and one water tanker (5000 Ltr) for drinking and water sprinkling are proposed that are deployed in the mine as and when required on hire basis. Thus, there is no deviation observed.

Details of violations observed during current inspection and compliance position of violation pointed out

Violation observed		Show couse position	
Rule NO.	Issued on Compliance on	Rule NO.	Issued on Compliance on

Date :**(ASHISH MISHRA)**

Indian Bureau of Mines